

Resistor Tuning

Abstract

A structure for resistors and the method for tuning the same. The resistor comprises an electrically conducting region coupled to a liner region. Both the electrically conducting region and the liner region are electrically coupled to first and second contact regions. A voltage difference is applied between the first and second contact regions. As a result, a current flows between the first and second contact regions in the electrically conducting region. The voltage difference and the materials of the electrically conducting region and the liner region are such that electromigration occurs only in the electrically conducting region. As a result, a void region within the electrically conducting region expands in the direction of the flow of the charged particles constituting the current. Because the resistor loses a conducting portion of the electrically conducting region to the void region, the resistance of the resistor is increased (i.e., tuned).